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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,741	08/29/2003	Johnathon Brasseur	9858-000327	3086
28997	7590	01/04/2005	EXAMINER	
HARNESS, DICKY, & PIERCE, P.L.C			HOANG, TU BA	
7700 BONHOMME, STE 400			ART UNIT	
ST. LOUIS, MO 63105			PAPER NUMBER	

3742

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/652,741

Applicant(s)

BRASSEUR ET AL.

Examiner

Tu Ba Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 8-15 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Election/Restrictions

Applicant's election with traverse of group I with claims 1-7 and 16-17 and specie I, Figures 1-5 with claims 1-7, 13, and 14-17 in the reply filed on 19 October 2004 is acknowledged. The traversal is on the ground(s) that each of the claims are directed to the common subject matter of a vented shield system for controlling the flow of a secondary gas in different cutting modes and depending on the mode of cutting, different amounts of the gas must be vented and thus the claimed invention provides a vented shield system that accommodates each of these different modes of cutting through the use of a different style of shield cap for the same shield cup body. these claims are related because they are capable of being used together as part of a common vented shield system which clearly can not be divergent subject matter (emphasis added). Further, the claims are directed to a common vented shield system for use in a plasma torch that specifically deals with venting a secondary gas would not be unrelated inventions in light of examples cited in MPEP § 806.04 and 808.01 and these claims are all within the same subclass definition (i.e., subject matter including structure for delivering working and shielding gases), and the characterization of the claimed invention (i.e., the classification of the claimed invention) or the existence of multiple subclasses should not be a grounds for restriction requirement as it is common knowledge that a single invention may be classified in more than one class/subclass combination (emphasis added). And furthermore, applicant has also traversed the species requirement based on the ground that the Examiner has identified distinct species based on the use of different shield caps that correspond with the different cutting modes with a common vented shield system, the vented shield system illustrated in Figures 6-7 comprise the claimed flow control member as does Figures 1-5 with the exclusion of the front end style of the shield cap which is the difference that is not included in the claims and further submits that while these species are distinct, they are so closely related that no additional searching would be required by the Examiner (emphasis added), therefore request that the election requirement be withdrawn. This is not found persuasive because as the Examiner has pointed out in the previous Office action, inventions are unrelated since **they are not disclosed as capable of use together** and they have **different modes** of operation, different functions, or different effects. Applicant has argued that "the claims are directed to the *common subject matter* of a *vented shield system for controlling the flow of a secondary gas* in **different cutting modes** and depending on the mode of cutting, different amounts of the gas must be vented and thus the claimed invention provides a vented shield system that accommodates each of **these different modes of cutting** through the use of a **different style of shield cap** for the same shield cup body. It is clear that in group I, the claims are directed to a common subject matter of a vented system that is different from the common subject matter of the claims in group II since as applicant submitted, such "common subject matter" has different modes of cutting (i.e. operation) through the use of different style of shield cap that accommodates such different modes.

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Thus such "common subject matter" in group I is clearly not the same as such "common subject matter" recited in group II. Applicant has also stated that the claims of all of the groups are related because they are capable of being used together as part of a common vented shield system without pointing out evidence showing such common vented shield system having a shield cap encompassing both a flow control member for distally and proximally venting the gas there through and an annular ridge for blocking the gas flow. Thus, as for the reasons et forth in the previous Office Action, there is no indication that both the control member and the annular ridge were capable of being used together but separately used in a single combination with the shield cap. Furthermore, because Applicant has not responded or distinctly and specially point out any supposed errors in the restriction requirement applied among groups I, III, and IV, but merely questioning the proper classification of the groups and then concluded that all of the groups have fallen under the same class/subclass classification, thereby the subject matter of all of the groups cannot be divergent, the restriction requirement is deem to be proper and such election of group I would have been treated as an election without traverse (MPEP § 818.03(a)).

It is clear that the existence of classed with subclasses is only and always for defining proper classification purpose since each group may be acquired a separate status in the art. Such existence of multiple subclasses should have never been any ground for restriction requirement and the examiner has never intended to do so. The grounds for restriction requirement have been clear stated in the previous Office action in which they are based on unrelated inventions, subcombinations, or combinations in light of their recognized divergent subject matters while Applicant arguments are based on the conclusion of a common existence of class/subclass for all groups have not convinced the Examiner that all groups are directed to the same subject matter that cannot be divergent, there is no burden of search to the examiner, or there are any supposed errors in the restriction requirement.

Regarding Applicant traversal in the distinct species of the claimed invention, as Applicant has submitted that "while **these species are distinct**, they are so closely related that no additional searching would be required by the Examiner" (emphasis added). Since there is no evidence or admission showing the species are obvious variants but an admission of such distinct species, the restriction requirement is deem to be proper. Applicant argument based on the ground that because these distinct "species are so closely related that no additional searching would be required by the Examiner" is irrelevant. Since there is no generic claim and "so closely related" species are clearly and still distinct species as defined by their different Figures or embodiments, burden of searching would clearly be required. However, burden of search may not be the ground for the restriction under species requirement, and in this case, applicant has clearly submitted that these species are distinct.

Thus, the requirement is still deemed proper and is therefore made FINAL.

Claims 8-15 and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions and species, there

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being no allowable generic or linking claim. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, there is insufficient antecedent basis for "the anodic potential side" recited at lines 3-4 in the claim or from the preceding claim since the "plasma arc torch" has not yet been positively cited as part of or in combination with the claimed system.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindsay et al (US 6,084,199). Lindsay et al ('199) shows all features of the claimed invention including a vented shield system (Figures 6A-B), for use in a plasma arc torch 310, which comprises a shield cup body 216 defining a distal end portion and at least one gas passage (i.e., arrow with Gs) extending along the distal end portion, a shield cap 432 disposed proximate the distal end portion of the shield cup body 216, a nonconductive flow control member (336,276,274,270) disposed within the shield cap 432 for preventing arcing between the plasma torch tip (or electrode) and the shield cap, wherein a portion of a secondary gas Gs flowing through the plasma arc torch 310 is vented distally through the flow control member and another portion of the secondary gas is vented proximally through the gas passage (i.e., first and second subflows, column 10, lines 40-48) with the same flow rate, the shield cap 432 defines a distal face to block molten material from contacting portions (i.e., nozzle 318) of the plasma arc torch and a plurality of channels 280 (i.e., at least four channels or passages) formed in the distal face for providing gas flow passages and molten material passages, a conductive insert or tailstock 272 of the electrode 212 disposed within the shield cup body with the tip (or electrode 212) of the plasma torch contacts the insert for electrical continuity.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Luo (US 5,856,647), McGrath et al (US 6,069,339), Roberts et al (US 6,163,008), Sanders et al (US 5,120,930), Raney et al (US

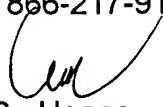
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4,967,055), Allen Gilbert V. (US 3,469,069), and Brasseur et al (US 2004/0169018).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (571) 272-4780. The examiner can normally be reached on Mon-fri from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu Ba Hoang
Primary Examiner
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December 28, 2004